REMARKS

The Examiner's Action mailed on January 25, 2007, has been received and its contents carefully considered.

In this Response, Applicants have not amended. For at least the following reasons, it is submitted that this application is in condition for allowance.

Claims 1-8 were rejected under 35 U.S.C. §103(a) as being obvious over *Duvvury* (U.S. 2005/0213560 A1) in view of *Anderson et al.* (U.S. 2003/0217123 A1). This rejection is respectfully traversed.

Duvvury discloses an apparatus and method for automatic cluster network device address assignment, and a cluster network device logically configured by a group of network devices, such as Ethernet switches. The cluster has one commander device and one or more member devices, and the devices can be arranged in a star topology (for example, with the commander switch at the center, where all of the member switches may be added to the cluster at once), connected in a daisy-chain topology (for example the candidate switch that is connected to the commander switch is added first, and then each subsequent switch in the chain is added as it is discovered by the Cisco Discovery Protocol ("CDP")), or daisy-chained off a star topology (for example all the switches that are directly connected to the commander switch may be added first, and then the daisy-chained switches may be added one at a time). See the Abstract and ¶[0075]:

> [0075] The method of creating a cluster of Ethernet switches depends on each particular network configuration. If the switches are arranged in a star topology, as in FIG. 8, with the commander switch at the center, all of the member switches may be added to the cluster at once. On the other hand, if the switches are connected in a daisy-chain topology, as in FIG. 9, the candidate switch that is connected to the commander switch is added first, and then each subsequent switch in the chain is added as it is discovered by CDP. If switches are daisy-chained off a star topology, as in the exemplary hybrid configuration shown in FIG. 10, all the switches that are directly connected to the commander switch may be added first, and then the daisy-chained switches may be added one at a time.

Each of the Ethernet switches includes a Layer 1 Physical Interface ("PHY"), a Layer 2 Media Access Control Interface ("MAC"), a frame buffer memory, a source address table memory, a discovery protocol logic, a learning logic, a forwarding logic, a packet redirection logic, and a configuration and management interface. In *Duvvury*, the Ethernet switches of the cluster are connected in a daisy-chain topology rather than switched to a daisy chain test mode.

More specifically, *Duvvury* does not disclose "a switch for switching the Ethernet switch to a daisy chain test mode" and the Office action admits that *Duvvury* does not disclose "an address resolution control logic including a test engine for performing a packet source address learning process under the daisy chain test mode to deliver a test packet through the plurality of ports progressively", as recited in the present claim 1.

Further, *Duvvury* relates to communication between the Ethernet switches in a cluster, i.e., the data packets are sent between the Ethernet switches in the cluster (see ¶[0023] lines5-9: "Packet redirection logic **260** examines the source

and destination addresses of Ethernet packets under control of the configuration and management interface **270** and forwards them to other network devices in a cluster configuration" and ¶[0086] lines 1-3: "Configuration and management data packets are sent between the commander **100** and member switches **102-A-102-N** via the network connection"), but the present application relates to a single Ethernet switch, i.e., the test packet is delivered between the ports within an Ethernet switch rather than the Ethernet switches in a cluster.

Anderson et al. discloses a system and method for accessing and operating personal computers remotely for capturing, digitizing and communicating video signals from a host computer to a remote computer through a remote access device (see Abstract), and never mentions Ethernet switches. The modules are daisy chained together (see FIG. 10 and ¶[0449] lines 1-6: "Normally NET-911 Control Modules are connected to one of the KEY-VIEW PC's serial port (FIG. 12). These modules are daisy chained together (FIG. 10) and connected to each Host PC accessible by the KEY-VIEW PC to permit serial access to and power control of the Host PCs by a remote user"), and when modules are first installed on the daisy-chain, it is important to test that the module functions properly by accessing the module, toggling power to the device connected to the module, and testing that whatever is connected to the module's SERIAL port can be successfully accessed serially (see ¶[0573]: "When modules are first installed on the daisy-chain, it is important to test that the module functions properly by accessing the module, toggling power to the device

connected to the module, and testing that whatever is connected to the module's SERIAL port can be successfully accessed serially").

More specifically, in *Anderson et al.*, the daisy chain is a connected configuration rather than a test mode, and the module functions are tested by accessing whatever is connected to the module's serial port rather than delivering a test packet through the ports progressively. Hence, *Anderson et al.* also fails to disclose "an address resolution control logic including a test engine for performing a packet source address learning process under the daisy chain test mode to deliver a test packet through the plurality of ports progressively" as recited in the present claim 1.

Further, *Anderson et al.*'s disclosed system and method are for accessing and operating personal computers remotely, rather than a Ethernet switch, *Anderson et al.* never mentions Ethernet switches, and the term "Ethernet switch" never appears in *Anderson et al.*

Consequently, as neither *Duvvury* nor *Anderson et al.*, whether taken separately or in combination, teaches or suggests "an address resolution control logic including a test engine for performing a packet source address learning process under the daisy chain test mode to deliver a test packet through the plurality of ports progressively" as recited in claim 1, claims 1-8 are allowable.

Claims 9-14 were rejected under 35 U.S.C. §103(a) as being obvious over *Chase et al.* (U.S. 2004/0202157 A1) in view of *Duvvury* (U.S. 2005/0213560 A1). This rejection is respectfully traversed.

Chase et al. discloses a technique for Ethernet access to packet-based services to route data in an Ethernet protocol network (¶[0005] lines7-9: "Thus, there is a need for a technique for routing data in an Ethernet protocol network that overcomes the aforementioned disadvantages"), and an Ethernet protocol Metropolitan Area Network (MAN) comprises of a plurality of Multi-Service Platforms (MSPs), such as Ethernet switches or the like, are connected in daisy-chain fashion by a fiber ring or SONET ring infrastructure (¶[0017]:

> FIG. 1 depicts an Ethernet Protocol Metropolitan Area Network (MAN) **10** comprised of a plurality of Multi-Service Platforms (MSPs) $\mathbf{12_1}$-$\mathbf{12_n}$ where n is an integer, each MSP taking the form of an Ethernet switch or the like. In the illustrated embodiment n=4 although the network **10** could include a smaller or larger number of MSPs. A fiber ring or SONET ring infrastructure 14 connects the platforms $\mathbf{12_1}$-$\mathbf{12_4}$ in daisy-chain fashion allowing each MSP to statistically multiplex information onto, and to statistically de-multiplexing information off the ring infrastructure **14**.

Chase et al. only mentions MAP taking the form of an Ethernet switch or the like and the infrastructure connecting the platforms in a daisy-chain, and *Chase et al.* never refers to testing an Ethernet switch.

More specifically, *Chase et al.* provides a technique for enabling access to a packet-based service, such as IP, Frame Relay, and ATM, through the Ethernet protocol network rather than a daisy chain test for the Ethernet switch (see ¶[0001]: "This invention relates to a technique enabling access to packet-based services, such as IP, Frame Relay, and ATM, through an Ethernet Protocol

network"). Furthermore, the premises **16000**$_1$ to **16000**$_3$ originate information frames for receipt at MSP**12000**$_2$, the MSP **12000**$_2$ tags the frames for transmission on the fiber ring infrastructure **14** to the CO MSP **12000**$_4$ for receipt at the ATM switch **30**, and then the ATM switch **30** maps the frame to one of Frame Relay recipients' 32$_1$, **32**$_2$, or **32**$_3$, ATM recipients **32**$_4$ or **32**$_5$ or IMA (Inverse Multiplexing over ATM) recipient **32**$_6$. See FIG. 5 and ¶[0028] lines 10-24:

> As seen in FIG. 5, each of premises **16000**$_1$, **16000**$_2$ and **16000**$_3$ belonging to customer **1**, customer **2** and customer **3**, respectively 5 may originate information frames for receipt at MSP **12000**$_2$ in the MAN **10000**. The MSP **12000**$_2$ tags each frame with the corresponding customer descriptor prior to statistically multiplexing the data for transmission on the fiber ring infrastructure 14 to the CO MSP **12000**$_4$ for receipt at the ATM switch **30**. The ATM switch **30** then maps the frame to the appropriate PVC in accordance with the customer descriptor in the frame in a manner similar to the mapping described with respect to FIG. 3. Thus, the ATM switch **30** could map the frame to one of Frame Relay recipients' **32**$_1$, **32**$_2$, or **32**$_3$, ATM recipients **32**$_4$ or **32**$_5$ or IMA (Inverse Multiplexing over ATM) recipient **32**$_6$.

More specifically, the information frames of *Chase et al.* are sent between the different devices, such as between the premises, the MSP, the ATM, and the recipients, rather than a plurality of ports within the same device.

The Office Action admits that *Chase et al.* fails to teach or suggest "a packet source address learning process for delivering the test packet from the start transmission port to the stop receiving port progressively" as recited in present claim 9.

Duvvury discloses how a packet intended for a member switch is processed by the commander, and the member switch is determined based on a

command from the management station **104** is received by the Ethernet module **122** of the commander switch **100**. See FIG. 12 and ¶[0086] lines 6-20:

> FIG. 12 illustrates in block diagram form how a packet intended for a member switch is processed by the commander. A command from the management station **104** is received by the Ethernet module **122** of the commander switch **100**. The command is processed at the IP layer **124**, UDP or TCP layer **126**, and Management Application layer **128** of the commander switch **100**. The Management Application layer **128** determines that the command is intended for member switch **102**, and performs redirection by translating the port number in the received command to the appropriate port for member switch **102**. The redirected command flows down through the UDP or TCP layer **126**, the IP layer **124**, and the Ethernet layer **122** of the commander switch **100**, and is passed on via Ethernet to the member switch **102**.

In *Duvvury*, the discovery protocol logic receives, processes, and sends Cisco Discovery Protocol ("CDP") or other discovery protocol packets to neighboring network devices on the network, and the packet redirection logic examines the source and destination addresses of Ethernet packets and forwards them to other network devices in a cluster configuration. See ¶[0023] lines 1-9:

> According to embodiments of the present invention, discovery protocol logic **230** receives, processes, and sends Cisco Discovery Protocol ("CDP") or other discovery protocol packets to neighboring network devices on the network. Packet redirection logic **260** examines the source and destination addresses of Ethernet packets under control of the configuration and management interface **270** and forwards them to other network devices in a cluster configuration.

More specifically, the packets are sent between the network devices in a cluster configuration, such as between the commander and member switches via the network connection (¶[0086] lines 1-3: "Configuration and management data

packets are sent between the commander **100** and member switches **102-A-102-N** via the network connection"), rather than between the ports of an Ethernet switch.

Further, in *Duvvury*, the ports belong to different switches, and a packet destination address is determined based on the command from the management station. In the present application, the ports belong to the same switch, and the learning process sets a packet destination address as a next port. Therefore, *Duvvury* also fails to disclose "a packet source address learning process for delivering the test packet from the start transmission port to the stop receiving port progressively" as recited in the present claim 9.

Consequently, neither *Chase et al.* nor *Duvvury*, whether taken separately or in combination, teaches or suggests "a packet source address learning process for delivering the test packet from the start transmission port to the stop receiving port progressively" as recited in present claim 9, and therefore claims 9-14 are also allowable.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Should any fee be required, however, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002, and advise us accordingly.

Respectfully submitted,

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Date

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